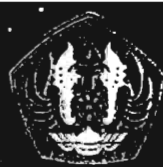


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ISPST 2014

*International Symposium on
Pharmaceutical Science and Technology*



Organized by:
Faculty of Pharmacy Universitas Padjadjaran
Bandung, Jatinangor, West Java, Indonesia
September 16th-19th, 2014

Abstracts & Programs

In collaboration with:



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Preface from
Chairman of the Organizing Committee



Pharmaceutical science has significantly been developing, following recent findings in methods, computation, and instruments. The global pharmaceutical industry, which includes drug discovery, manufacturing as well as controlling its quality-efficacy-and safety, has experienced substantial changes during these years. Thus, to be able to developing the quality of drugs, pharmacists are expected to understand how discoveries in science and technology translate into business opportunities within the pharmaceutical industry.

International Seminar on Pharmaceutical Science and Technology is intended to cover the latest findings in pharmacy and medicines, including their related fields such as chemistry, physics and biology.

This seminar is also dedicated to promoting more specific fields, that are analysis of pharmaceuticals, cosmetics, and food, forensic and biomedical analysis, and pharmaceutical technology including drug compounding and dispensing. In this seminar we welcome scientists from academics and industries, while motivating young researchers and students, who have engaged themselves in related fields. There are thirteen speakers from all over the world, e.g Spain, Germany, Austria, Japan, New Zealand, Malaysia, and Indonesia, and more than one hundred researchers participated as poster and oral presenters from Malaysia, India and Indonesia. We hope that this international event will help us enhance and widen our knowledge and scientific network.

On behalf of the organizing committee, I would like to thank all invited speakers and contributed participants, who have willingly shared their researches and experiences. The committee also wants to thank the Directorate General of Higher Education, the Rector of Universitas Padjadjaran, the Dean of Faculty of Pharmacy Universitas Padjadjaran, the Dean of School of Pharmacy Bandung Institute of Technology, and all partners who have kindly supported this seminar. We wish everyone will enjoy the lectures, the food and the beautiful scenery of our campus.

With kindest regards,

Jutti Levita

Welcome Speech from
Dean of Faculty of Pharmacy Universitas Padjadjaran



Honorable Rector Universitas Padjadjaran, Dean of School of Pharmacy of Bandung Institute of Technology

Distinguished guests, invited speakers and all participants of the Workshop and International Seminar on Pharmaceutical Science and Technology 2014.

First of all, please allow me to extend my warmest welcome to you at the ISPST 2014 this day here at our Jatinangor campus. We are very proud to present this great event that facilitates findings in all pharmaceutical areas, including basic and applied sciences related to it.

Pharmaceutical science is a wide discipline discussing both analytical and manufacturing aspects, and has been rapidly growing since the last decades. Novel findings in drug discovery and its good manufacturing process to meet patient's compliance are needed to overcome the growth of new diseases, especially caused by resistant viruses and bacteria.

Based on the above, Faculty of Pharmacy of Universitas Padjadjaran collaborated with School of Pharmacy of ITB to organize this program. The workshop and the seminar are aimed to explore pharmaceutical sciences and application in the development of healthcare products. Through sharing and networking, ISPST 2014 will provide an opportunity for researchers, practitioners and educators to exchange research evidence, practical experiences and innovative ideas on issues related to pharmaceutical sciences.

We realize that this event is only a small effort to contribute exchanges in researches and experiences, therefore more collaborative works and continuous relationship between researchers are still needed. We hope that this seminar will be a starting point for more joint-projects and other MoUs.

Last but not least, I would like to thank the organizing committee for all efforts and hardworking they have done to make this event successful. I wish all of the speakers and participants will have a good time in Jatinangor.

Regards,

Dr. Ahmad Muhtadi, M.S., Apt
Dean

Opening Remarks from
Rector of Universitas Padjadjaran



Distinguished guests, invited speakers, and all participants of the Workshop and International Seminar on Pharmaceutical Science and Technology 2014.

First of all, I would love to greet and welcome you at our Jatinangor campus. I feel very honoured that Universitas Padjadjaran in celebrating its 59th anniversary is hosting this great event that facilitates new findings in all pharmacy areas.

This seminar covers drug discovery and development, includes its manufacture and evaluations to meet the criteria of drug quality, efficacy and safety. We really hope that our university, especially Faculty of Pharmacy, can make significant contribution in the growth of new drugs.

I acknowledge the Faculty of Pharmacy of Universitas Padjadjaran that has succeeded in building colaborations with School of Pharmacy of ITB and University of Alcala as well as with an international journal to organize this program and won a prestigious grant from Directorate General of Higher Education. I hope that by sharing and networking, this seminar will provide a good opportunity for researchers to share their experiences and innovative ideas on issues related to pharmaceuticals sciences.

Finally, I wish all speakers and participants will have a pleasant time in Jatinangor.

Regards,

Prof. Dr. Ir. Ganjar Kurnia, DEA
Rector

Advisory Board:

Dr. Ahmad Muhtadi, M.S., Apt (Dean of Faculty of Pharmacy Universitas Padjadjaran)

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WORKSHOP

First Day : Tuesday, 16th September 2014

Location : PPBS Computing Labs. Universitas Padjadjaran

07.30 – 08.30	Registration	
08.30 – 09.00	Opening	
09.00 – 10.00	Introduction to Molecular Dynamics Session I	Dr. Sy Bing Choi Muhammad Yusuf, M.Si
10.00 – 11.00	Introduction to Molecular Dynamics Session II	
11.00 – 12.00	Introduction to Molecular Dynamics Session III	
12.00 – 13.00	Lunch Break	
13.00 – 14.00	Molecular Dynamics Simulation Session I	Dr. Sy Bing Choi Muhammad Yusuf, M.Si
14.00 – 15.00	Molecular Dynamics Simulation Session II	
15.00 – 16.00	Molecular Dynamics Simulation Session III	

Second Day : Wednesday, 17th September 2014

Location : PPBS Computing Labs. Universitas Padjadjaran

09.00 – 10.00	Introduction to Pharmacophore Modelling Session I	Prof. Thierry Langer, Ph.D Sharon D Bryant, Ph.D
10.00 – 11.00	Introduction to Pharmacophore Modelling Session II	
11.00 – 12.00	Introduction to Pharmacophore Modelling Session III	
12.00 – 13.00	Lunch Break	
13.00 – 14.00	Pharmacophore Modelling – Drug Discovery Session I	Prof. Thierry Langer, Ph.D Sharon D Bryant, Ph.D
14.00 – 15.00	Pharmacophore Modelling – Drug Discovery Session II	
15.00 – 16.00	Pharmacophore Modelling – Drug Discovery Session III	
16.00 – 16.30	Closing	

Scientific Programs and Schedule

SEMINAR

First Day : Thursday, 18th September 2014

Venue : Rectorate Building Universitas Padjadjaran

07.30 – 08.30	Registration	
08.30 – 09.30	Opening Ceremony: Sundanese dance Welcome speech [chairman, daen, rector]	-
09.30 – 10.00	Coffee break and expo visit	
10.00 – 11.00	Keynote Speaker I: Prof. Federico Gago [Spain] Moderator: Prof. Dr. Daryono Hadi Tjahjono	-
11.00 – 12.00	Keynote Speaker II: Prof. HM Urbassek [Germany] Moderator: Dr. Keri Lestari	
12.00 – 13.00	Lunch break, prayer, expo visit, poster session	
13.00 – 14.00	Keynote Speaker III: Drs. Rusdi Rosman, MBA, Apt [Director of PT. Kimia Farma Tbk. – Indonesia] Moderator: Prof. Dr. Moelyono MW	-
14.00 – 15.00	Plenary Session I: Assoc. Prof. Tomoya Uehara [Japan] Assoc. Prof. Janie Sheridan [New Zealand] Moderator: Mutakin, Ph.D	
15.00 – 17.00	Parallel Session	Parallel Session

Second Day : Friday, 19th September 2014

Venue : Rectorate Building Universitas Padjadjaran

08.30 – 09.30	Keynote Speaker IV: Prof. Thierry Langer [Austria] Moderator: Prof. Dr. Anas Subarnas	-
09.30 – 10.00	Coffee break and expo visit	
10.00 – 11.00	Plenary Session II: Prof. Dr. Sharifuddin bin Md Zain [Malaysia] Prof. Dr. Yahdiana Harahap [Indonesia] Moderator: Dr. Tiana Milanda	Plenary Session III: DUKE-NUS Lecture on Hormone Regulation Prof. Dr. Paul Yen MD Rohit Anthony Sinha, Ph.D Zhou Jin, Ph.D Roni Lesmana, MD, Ph.D Moderator: Dr. Med. Melisa Intan Barliana
11.00 – 13.00	Lunch break, Jumatan prayer, poster session, expo visit	
13.00 – 14.30	Plenary Session III: Sharon D Bryant, Ph.D [Austria] Assoc. Prof. Dr Min-Tze Liong [Malaysia] Prof. Dr. Habibah A Wahab [Malaysia] Moderator: Muchtaridi, Ph.D	Plenary Session IV: Wai Keat Yam, Ph.D [Malaysia] Assoc. Prof. Dr. rer. nat Rahmana Emran [Indonesia] Dr. rer. nat. I Made A Gelgel W [Indonesia] Moderator: Prof. Dr. Supriyatna
14.30 – 17.00	Parallel Session	Parallel Session
17.00 – 17.30	Announcements selected articles, best poster & closing ceremony	

Scientific Programs and Schedule

PARALEL SESSION

First Day : Thursday, 18th September 2014

Room: Bale Sawala

Moderator: Prof. Sahidin			
OP 001	Muhammad Mussara/ Husain	Synthetic Studies Towards Scaffold-Based CXCR4 Antagonist	15.30-15.42
OP 002	Wan Nadilah Adibah	Alpha-Glucosidase inhibitory Activity of The Ethanolic Extract From Selected Malaysian Plants: An Anti-Hyperglycaemic Agent	15.42-15.54
OP 003	Dewi Melani	Physical Characteristics of Ovalbumin-Loaded Alginate Microspheres Prepared Using Different Concentration of Bac12 and Alginate	15.54-16.06
Moderator: Taofik Rusdiana, Ph.D			
OP 004	Yoga Windhu Wardhana	Solubility Improvement of Clopidogrel Bisulfate Prepared With Various Polyethylen Glycol Density and Different Kind of Hydroxy Propyl Celullose By Solvent Evaporation Method	16.10-16.22
OP 005	Prof. Sahidin	Profile of Anticancer and Radical Scavenging Activities of Steroids From Stems of Polygonum Pulchrum	16.22-16.34
OP-006	Ni Putu Eka Leliqia	Effect of Fermentation Time on (+)-Catechin Content in Kombucha With Gambier Substrate	16.34-16.46

Room: Bale Rucita

Moderator: Dr. Tiana Milanda			
	Mr. Sashi Alok		15.30-14.42
	Mrs. Monika Sabharwal	Things We Should Know About Publication Process	15.42-15.54
OP-007	Ni Made Pitri Susanti	Identification and Determination of Sildenafil In Jamu Obat Kuat Using TLC-Spectrophotodensitometry	15.54-16.06
Moderator: Mr. Sashi Alok			
OP-008	Cokorda Istri Sri Arisanti	Fully Pregelatinized Cassava Starch Physicochemical Properties: Influence of Water : Starch Ratio and Temperature	16.10-16.22
OP-009	Fika Nuzul Ramadhani	The Effect of Education by Calcium Carbonate Leaflet on Medication Adherence of Chronic Renal Failure Patients With Hemodialysis in RSU PKU Muhammadiyah Yogyakarta	16.22-16.34
OP-010	Endang Diyah Ika Sari	A Formula Optimization of Nifedipine Tablet Combination With Floating - Mucoadhesive System in a Simplex Lattice Design	16.34-16.46

Second Day : Friday, 19th September 2014

Room: Bale Sawala

Moderator: Dr. Sri Adi Sumiwi			
OP-011	Kiran Thakur	Bioprospecting Riboflavin Producing Lactobacilli : A New Hope For Developing Countries.	14.30-14.42
OP-012	Dyah Aryani Perwitasari	Polymorphisms of NAT2 Genes in Indonesian Tuberculosis Patients	14.42-15.04
OP-013	Ivan Surya Pradipta	Prescribing Assessment in Bandung's Community Health Care Centers : An Observational Study Based on Who's Indicators	15.04-15.16
OP-014	Nyi Mekar Saptarini	Structure-Based Study of Six Flavonoid Compounds of Blueberry Leaves and Celery Herb As ACE inhibitor	15.16-15.28

Scientific Programs and Schedule

Room: Bale Sawala

Moderator: Dr. rer. nat. Anis Yohana Ch			
OP-015	Prashant L. Pingale	Influence of Ph, Surfactants and Sink Condition on Dissolution Rate of BCS Class II Drugs Sertraline HCl and Indomethacin	15.35-15.47
OP-016	Ratu Safitri	Iron Chelation Ability of Granule Sappan Wood (<i>Caesalpinia Sappan</i> , L.) Extract on Iron-Overloaded	15.47-15.59
OP-017	Nining Ratnaningsih	Effect of Sappan Wood Extract (<i>Caesalpinia Sappan</i>), Wheat Grass and Vitamin E Treatment on The Liver Structure of Iron Overload Rat (<i>Rattus norvegicus</i>)	15.59-16.11
OP-018	Ade Zuhrolun	Preliminary Identification of Isolate From Ethyl Acetate Fraction of <i>Annona Muricata</i> L.	16.11-16.23
Moderator: Dr. Ajeng Diantini			
OP-027	Muchtardi	Evidence of Combining Pharmacophore Modeling-Docking Simulation For Screening on Neuraminidase inhibitors Activity of Natural Product Compounds	16.23-16.35
OP-028	Anis Yohana Ch	Release of Propranolol HCl As Drug Combination From Matrix Tablet System	16.35-16.47
OP-029	Melisa I barliana	Anticancer Activity From <i>Acalypha indica</i> Linn. in Lncap Prostate Cancer Cell Line	16.47-16.59
OP-030	Yola Desnara	Formulation of Hand Sanitizer Gel Containing Ethyl Acetate Fraction Breadfruit Leaves (<i>Artocarpus altilis</i> (Parkinson) Fosberg)	16.59-17.11
OP-031	Holis A Holik	Selenium Concentration in Daily Consumed Foods in Bandung City Indonesia	17.11-17.23

Room: Bale Rucita

No	Speakers	Title	Time
OP-019	Alasen Sembiring Milala	The Effect of Delayed Sterilization For 3 and 4 Days on Sterility of 5% Dextrose Solution	14.30-14.42
OP-020	Emi Erfan	Stability of in Vitro Antioxidant Activity of Aqueous Flower Extract of <i>Citrialematea</i>	14.42-15.04
OP-021	Purwantiningsih	Effect of Standardized <i>Eurycoma Longifolia</i> Extract on Rosiglitazone Metabolism in The Old Normal Male Rat Hepatocytes: A Mechanism Study	15.04-15.16
OP-022	Endang Dwi Wulansari	Quality Parameters of Ethanolic and Aqueous Soursop (<i>Annona Muricata</i> L.) Leaves Dry Extract	15.16-15.28
Moderator :Dr.Rer.Nat Sophi Damayanti			
OP-023	Ni Luh Putu Vidya Paramita	A Comparison of The Antibacterial Activities of Crude Extract and Purified Extract of <i>Piper betle</i> L. Leaf Against <i>Propionibacterium acnes</i>	15.35-15.47
OP-024	Herawaty Ginting	Diuretic Effect Test of Watercress Herbs' Ethanol Extract (<i>Nasturtium officinale</i> R.Br) on White Male Rats	15.47-15.59
OP-025	Resmi Mustarichie	Analysis Total Flavonoid Calculated As Genistein, Antioxidant and Anti-inflammatory Properties of Cranberry Ethanol Extract	15.59-16.11
OP-026	Nyi Mekar S	Determination of Total Flavonoid Calculated As Genistein, Antioxidant and Anti-inflammatory Activities of <i>Dendrophthoe pentandra</i> Ethanol Extract	16.11-16.23
Moderator : Dr Izzati			
OP-032	Richie A I Chandra	Propranolol Hidrochloride Controlled Release Formulation Using Combination Hydroksipropil Methylcelulose (HPMC) and Ethyl Celulose (EC) as A Matrix With Direct Compress Method	16.23-16.35
OP-033	Parasuraman Subramani	Knowledge About The Role of The Pharmacist in The Nuclear Medicine Department: A Questionnaire-Based Study Among Health-Care Professionals	16.35-16.47
OP-034	Keri Lestari	The Influence of Nutmeg Seed Extract Caplets (<i>Myristica fragrans</i> Houtt.) on Fasting Plasma Glucose Levels in Normoglikemik Rates	16.47-16.59
OP-035	Sandra Megantara	In Silico Approach For Geometry Optimizing and Ex Silico Method For Predicting Log P and Suectrum of Quercetin, Glucosamine, and Andrographolide	16.59-17.11
OP-036	Ellin Febrina	Antihypertensive Effects of Propolis, Royai Jelly, and Its Combinations in Sprague Dawley Rats With The Non-Invasive Blood Pressure Method	17.11-17.23

PHYSICAL CHARACTERISTICS OF OVALBUMIN-LOADED ALGINATE MICROSPHERES PREPARED USING DIFFERENT CONCENTRATION OF BaCl₂ AND ALGINATE

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ABSTRACT

The use of microspheres systems nowadays is important in the pharmaceuticals formulation. Alginates have received much attention as biodegradable polymer for controlled protein delivery. Ovalbumin was used as model antigen. The aim of the present research was to evaluate physical characteristics of ovalbumin-loaded alginate microspheres using aerosolisation technique. Various concentrations of alginate and crosslinking BaCl₂ were studied. In this study, the alginate microspheres were characterized in respect of encapsulation efficiency, yield, particle size, surface morphology and protein integrity. The comparative study between concentrations of cationic cross linking agents BaCl₂ and alginate polymer were investigated. Increasing concentration of alginate polymer from 2.5 to 3.5% reduced their particle size and formed smoother and spherical microspheres. Increasing Ba²⁺ concentration, simultaneously increased the encapsulation efficiency and yield. Scanning electron microscope (SEM) photomicrographs revealed that with the increase in the electrolyte concentration the density of the cross link is also increased. When the electrolyte concentration is increased from 0.5M to 0.75M the surface is smoother. Formula prepared using 0.75M BaCl₂ and 3.5% alginate polymer result the highest encapsulation efficiency (92%), the highest microspheres yield (73%) and the smallest microspheres size (3.73µm). Most of the formulations maintain the integrity of ovalbumin after 2 hours incubation in pH 1.2 followed by 8 hours incubation in pH 7.4. The different formulations produced different physical characteristics of ovalbumin-loaded alginate microspheres.

Keywords: alginate, BaCl₂, encapsulation, integrity, protein

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PMCA RELEASE STUDY OF BINARY LIPID BEESWAX AND MONOSTEARIC GLISERYL AS SOLID LIPID NANOPARTICLE (SLN) BASE

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ABSTRACT

Para methoxy cinnamic acid (PMCA) has been commonly widely used as antiinflammation drug. The aim of this reserach was to study release of PMCA from solid lipid nanoparticle (SLN) formed of binary lipid beeswax (BW) and monostearic glyceril (GMS). SLN PMCA is expected to prolong antiinflammation preparation. SLN-PMCA which used binary lipid BW-GMS 50:50 as SLN base has been proved in producing smallest particle size, physically as the most stable and give highest percentage of drug entrapment compared to its single lipid.

SLN was made using binary lipid beeswax (BW) and monostearic glyceril (GMS) as solid lipid nanoparticle (SLN) base and Tween 80 as stabilizer. This SLN was produced using *high shear homogenisation* (HPH) method. Release study was conducted in phosphate buffer medium pH 7,4±0,05 at 32°C and stirred at 100 rpm using *apparatus type 5-paddle overdisk*. PMCA concentration was measured spectrophotometrically at 286 nm. Release flux of PMCA from SLN base using beeswax as single lipid carrier was higher than SLN base using either monostearic glyceril as single lipid carrier or binary lipid beeswax (BW) and monostearic glyceril (GMS). In case of single lipid using monostearic glyceril (GMS), low entrapment efficiency, bigger particle size and physically unstable SLN was produced.

SLN consist of binary lipid beeswax (BW) and monostearic glyceril (GMS) was selected due to its characteristics and ability to retard release of PMCA.

Keywords: Para methoxy cinnamate acid (PMCA), solid lipid nanostructure (SLN), beeswax, glycerilmonostearat, release

References:

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The Organizing Committee wishes to announce our gratitude to the following who have contributed to the success of this seminar :

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 - Prof. Dr. Herbert M Urbassek [Germany]
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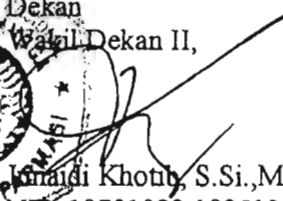
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Untuk melakukan presentasi orai pada kegiatan *International Seminar Pharmaceutical Science and Technology* pada tanggal 17 – 19 September 2014 di Universitas Padjajaran Jatinangor.

Demikian Surat Penugasan ini untuk dilaksanakan dengan baik dan penuh tanggung jawab.

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